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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER	
MONBLEAU, DAVIENNE N	

ART UNIT	PAPER NUMBER
2878	

DATE MAILED: 02/08/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

N·A

Office Action Summary	Application No.	Applicant(s)	
	10/081,865	BUTLER ET AL.	
	Examiner	Art Unit	
	Davienne Monbleau	2878	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *27 January 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-38,41-48,50-62 and 64-84* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-38,41-48,50-62 and 64-84* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *22 February 2002* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

The amendment filed 5/16/05 has been entered. Claims 1, 4-6, 9-11, 14, 16-19, 25, 26, 29-31, 34-36, 41, 42, 48, 50, 65, 71, and 80 have been amended. Claims 39, 40, 49, and 63 have been canceled. Claims 1-38, 41-48, 50-62, and 64-84 are pending.

Claim Objections

Claims 6, 14, 18, 25, 48, 62, 70, 79, and 84 are objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. The respective independent claims have all been amended to include a laser guide line, which must be produced by a laser beam.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 64 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Independent claim 50 recites a "set of one or more laser guide lines". Claim 64 recites "said set of one or more guides includes a track ball." It is unclear how the track ball is structurally connected to and functional with the laser guide line.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1-11, 14-16, 19-22, 25-36, 42-45, 48, 50-54, 62, 64-74, and 79-84, to the extent taught and understood, are rejected under 35 U.S.C. 103(a) as being unpatentable over Kakimoto et al. (U.S. 5,522,683) in view of Olds (U.S. 5,741,096).

Regarding Claim 1, *Kakimoto* teaches in Figure 5 a tool system to operate on a work piece (100) comprising a first guide system providing a first guide (101) and a tool comprising an action component (6) to operate on said work piece (100), a guide detector (3) to detect a position of said first guide position data corresponding to said position of said first guide (101), and a location detector (3) in communication with said guide detector (3) to receive said first guide position data, wherein said location detector (3) determines an orientation of said action component (6), based at least in part on said first guide position data. (See also column 6 lines

19-49.) *Kakimoto* does not teach that said first guide (101) is a laser guide line. *Olds* teaches in Figures 2-4 a line-laser assisted alignment apparatus comprising a mark (49) on a work piece (28) that is created by two laser line guides (48a and 48b). The intersecting projecting laser lines form the cross mark (39). It would have been obvious to one of ordinary skill in the art at the time of the invention to use a laser guide system in *Kakimoto*, as suggested in *Olds*, to provide an alignment means where the work piece may not be capable of having a mark on its surface. (See *Olds* column 1 lines 39-60).

Regarding Claim 26, *Kakimoto* teaches in Figure 5 a tool to operate on a work piece (100) comprising an action component (6) to operate on said work piece (100), a guide detector (3) to detect a position of a first guide (101) and provide first guide position data corresponding to said position of said first guide (101), and a location detector (3) in communication with said guide detector (3) to receive said first guide position data, wherein said location detector (3) determines an orientation of said action component (6), based at least in part on said first guide position data. (See also column 6 lines 19-49.) *Kakimoto* does not teach that said first guide (101) is a laser guide line. *Olds* teaches in Figures 2-4 a line-laser assisted alignment apparatus comprising a mark (49) on a work piece (28) that is created by two laser line guides (48a and 48b). The intersecting projecting laser lines form the cross mark (39). It would have been obvious to one of ordinary skill in the art at the time of the invention to use a laser guide system in *Kakimoto*, as suggested in *Olds*, to provide an alignment means where the work piece may not be capable of having a mark on its surface. (See *Olds* column 1 lines 39-60).

Regarding Claim 50, *Kakimoto* teaches in Figure 5 a tool to operate on a work piece (100) comprising an action component (6) to operate on said work piece (100), a location

detector (3) to determine an orientation of said action component (6), based at least in part on position of a set of one or more guides (101), and provide orientation information corresponding to said orientation, and a component controller (27 and 47) in communication with said location detector (3) to receive said orientation information and in communication with said action component (6) to adjust said action component (6) in response to said orientation information. (See also column 6 lines 19-49.) *Kakimoto* does not teach that said first guide (101) is a laser guide line. *Olds* teaches in Figures 2-4 a line-laser assisted alignment apparatus comprising a mark (49) on a work piece (28) that is created by two laser line guides (48a and 48b). The intersecting projecting laser lines form the cross mark (39). It would have been obvious to one of ordinary skill in the art at the time of the invention to use a laser guide system in *Kakimoto*, as suggested in *Olds*, to provide an alignment means where the work piece may not be capable of having a mark on its surface. (See *Olds* column 1 lines 39-60).

Regarding Claim 65, the method of a device is not germane to the issue of patentability of the device itself, since the device itself obviously uses the method. Therefore the rejection used on the device applies also to the method of the device. (See Claim 50 above.)

Regarding Claim 71, *Kakimoto* teaches in Figure 5 a tool to operate on a work piece (100) comprising an action component (6), storage devices (43), and a processor (33) in communication with said storage devices (43) and said action component (6), said processor (33) determining an orientation of said tool based on a position of a guide (101) and adjusting said tool in response to said orientation. (See also column 6 lines 23-49.) *Kakimoto* does not teach that said first guide (101) is a laser guide line. *Olds* teaches in Figures 2-4 a line-laser assisted alignment apparatus comprising a mark (49) on a work piece (28) that is created by two laser line

guides (48a and 48b). The intersecting projecting laser lines form the cross mark (39). It would have been obvious to one of ordinary skill in the art at the time of the invention to use a laser guide system in *Kakimoto*, as suggested in *Olds*, to provide an alignment means where the work piece may not be capable of having a mark on its surface. (See *Olds* column 1 lines 39-60).

Regarding Claim 80, *Kakimoto* teaches in Figure 5 a tool to operate on a work piece (100) comprising means (3) for detecting position data for one or more guides (101), means (3) for determining an orientation of said tool based in part on said position data, and means (27 and 47) for adjusting said tool in response to said orientation determine by said means (3) for determining. *Kakimoto* does not teach that said first guide (101) is a laser guide line. *Olds* teaches in Figures 2-4 a line-laser assisted alignment apparatus comprising a mark (49) on a work piece (28) that is created by two laser line guides (48a and 48b). The intersecting projecting laser lines form the cross mark (39). It would have been obvious to one of ordinary skill in the art at the time of the invention to use a laser guide system in *Kakimoto*, as suggested in *Olds*, to provide an alignment means where the work piece may not be capable of having a mark on its surface. (See *Olds* column 1 lines 39-60).

Regarding Claims 2 and 27, *Kakimoto* teaches in column 6 lines 37-40 that said location detector (3) provides orientation information corresponding to said orientation of said action component (6).

Regarding Claims 3, 28, 51, 66, 72, and 81, *Kakimoto* teaches in Figure 5 a set of indicators (17 and 37) in communication with said location detector (3) to receive said orientation information.

Regarding Claims 6, 14, 18, 25, 48, 62, 70, 79,and 84, *Kakimoto* as modified by *Olds* teaches that said first guide (101) is a laser beam.

Regarding Claims 7, 32, and 52, *Kakimoto* teaches in column 6 lines 37-40 that said orientation information indicates whether a tool adjustment is needed.

Regarding Claims 8, 15, 33, 53, 54, 68, 69, 73, 74, 82, and 83, *Kakimoto* teaches in Figure 5 a component controller (27 and 47) in communication with said location detector (3) to receive said orientation information and in communication with said action component (6) to adjust said action component (6) in response to said orientation information. (See also column 6 lines 40-48.)

Regarding Claims 4, 9, 16, 29, and 34, *Kakimoto* teaches in Figure 5 that said first guide (101) extends across a portion of said work piece (100) and said orientation information received from said location controller (3) indicates whether said action component (6) is oriented to be in line with said first guide. (See also column 6 lines 37-40.)

Regarding Claims 5 and 30, *Kakimoto* teaches in Figure 5 a first indicator (37) to be asserted when said orientation information indicates said action component (6) is oriented to be in line with said first guide (101), a second indicator (17) to be asserted when said orientation information indicates said component (6) is oriented to be offset to a first side of said first guide (101), and a third indicator (17) to be asserted when said orientation information indicates said component (6) is oriented to be offset to a second side of said first guide (101).

Regarding Claims 10 and 35, *Kakimoto* teaches in column 6 lines 40-44 that the component controller (27 and 47) orients said action component (6) to be in line with said first guide (101) in response to said orientation information.

Regarding Claims 11 and 36, *Kakimoto* teaches in column 6 lines 37-44 that said component controller (27 and 47) orients said action component (6) to be in line with said first guide (101), regardless of whether it is on a left or right side of said guide (101), and maintains said orientation of said action component (6) when it is in line with said first guide (101).

Regarding Claims 19 and 42, *Kakimoto* teaches a first guide (101) but does not teach a second guide. It would have been obvious, however, to one of ordinary skill in the art at the time of the invention to use more than one guide in the orientation/alignment device to improve the accuracy of the tool orientation with respect to the work piece. Increasing the number of reference points (i.e. guides) minimizes the orientation error.

Regarding Claims 20 and 43, see discussion on Claim 2.

Regarding Claims 21 and 44, see discussion on Claim 7.

Regarding Claims 22 and 45, see discussion on Claim 8.

Regarding Claim 31, *Kakimoto* as modified by *Olds* teaches in Figure 5 a first guide that said first guide (101) is a laser beam and that said detector (2) is an imaging CCD detector, which would include an array of photodetectors.

Regarding Claim 64, *Kakimoto* as modified by *Olds* teaches in Figure 5 a first guide that said first guide (101) is a laser beam but does not teach other types of guides. It would have been obvious, however, to one of ordinary skill in the art at the time of the invention to use other types of guides, such as wires or track balls, in *Kakimoto*, since they are known in the art for providing alignment assistance and would eliminate the need for controlling various laser beams and maintaining their stability.

Regarding Claim 67, *Kakimoto* teaches in Figure 5 and in column 5 lines 52-56 that said indicator (17) identifies a direction for steering said tool.

Claims 12, 13, 17, 18, 23, 24, 37, 38, 41, 55-61, and 75-78, are rejected under 35 U.S.C. 103(a) as being unpatentable over Kakimoto in view of Olds, as applied to Claims 1, 26, 50, and 75 above, and in further view of Dils et al. (U.S. 2004/0265079).

Regarding Claims 12, 37, 55, and 75, *Kakimoto* as modified by *Olds* teaches in Figure 5 a drilling apparatus but does not teach that other tools may be used. *Dils* teaches in the abstract a hand-held power tool having an object sensor and further teaches in paragraph [0035] that the invention may also be incorporated onto other hand-held power tools, such as a jigsaw. Although *Dils* teaches a different detection system than *Kakimoto*, *Dils* still teaches the desirability of using one type of system on many different types of tools. Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to use a jigsaw in *Kakimoto*, as suggested by *Dils*, to determine the orientation of a jigsaw with respect to an opaque workpiece. (See *Kakimoto* column 1 lines 31-34.) In this situation, the action component (6) would be the blade of the jigsaw and the component controller (27 and 47) would control the orientation of the blade.

Regarding Claims 13, 38, 56, 57, and 76, *Kakimoto* as modified by *Olds* teaches in Figure 5 a drilling apparatus but does not teach that other tools may be used. *Dils* teaches in the abstract a hand-held power tool having an object sensor and further teaches in paragraph [0035] that the invention may also be incorporated onto other hand-held power tools, such as a circular saw. Although *Dils* teaches a different detection system than *Kakimoto*, *Dils* still teaches the desirability of using one type of system on many different types of tools. Thus, it would have

been obvious to one of ordinary skill in the art at the time of the invention to use a circular saw in *Kakimoto*, as suggested by *Dils*, to determine the orientation of a circular saw with respect to an opaque workpiece. (See *Kakimoto* column 1 lines 31-34.) In this situation, the action component (6) would be the blade of the circular saw and the component controller (27 and 47) would control the orientation of the blade via pistons.

Regarding Claims 17, 24, 41, 47, 60, 61, and 78, *Kakimoto* as modified by *Olds* teaches in Figure 5 a drilling apparatus but does not teach that other tools may be used. *Dils* teaches in the abstract a hand-held power tool having an object sensor and further teaches in paragraph [0035] that the invention may also be incorporated onto other hand-held power tools, such as a nail gun. Although *Dils* teaches a different detection system than *Kakimoto*, *Dils* still teaches the desirability of using one type of system on many different types of tools. Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to use a nail gun in *Kakimoto*, as suggested by *Dils*, to determine the orientation of a nail gun with respect to an opaque workpiece. (See *Kakimoto* column 1 lines 31-34.) In this situation, the action component (6) would be a nail firing mechanism and the component controller (27 and 47) would enable the nail firing mechanism when said nail gun is in line with the first guide (101) and disable the nail firing mechanism when said nail gun is offset from said first guide (101).

Regarding Claim 18, *Kakimoto* as modified by *Olds* and *Dils* that said first guide (101) is a laser beam.

Regarding Claims 23, 46, 58, 59, and 77, *Kakimoto* as modified by *Olds* teaches in Figure 5 a drilling apparatus but does not teach that other tools may be used. *Dils* teaches in the abstract a hand-held power tool having an object sensor and further teaches in paragraph [0035] that the

invention may also be incorporated onto other hand-held power tools and provides various examples. Although *Dils* teaches a different detection system than *Kakimoto* and does not cite a router as one of the examples of other tools, *Dils* still teaches the desirability of using one type of system on many different types of tools. Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to use a router in *Kakimoto*, as suggested by *Dils*, to determine the orientation of a router with respect to an opaque workpiece. (See *Kakimoto* column 1 lines 31-34.) In this situation, the action component (6) would be the cutting head of the router and the component controller (27 and 47) would control the vertical displacement of the cutting head.

Response to Arguments

Applicant's arguments with respect to claims 1-38, 41-48, 50-62, and 64-84 have been considered but are moot in view of the new ground(s) of rejection.

Nonetheless, the Examiner would like to address a few of the Applicant's arguments. Applicant makes the following arguments:

A. *Kakimoto* does not teach "moving a workpiece to a line" (response, page 19).

B. *Olds* does not teach "an action component ... following the laser guide line" (response, page 19).

Regarding argument A, this limitation is not in the claims.

Regarding argument B, the Examiner maintains that *Olds* teaches this limitation. *Olds* teaches (Figure 3) that two laser line guide beams are projected onto the workpiece. *Olds* further teaches (Figure 4) that the point at which these laser line guide beams intersect form a mark (49). Thus, the mark (49) consists of two laser guide lines. Then, the operator searches for the mark

(49) and, once found, uses it to line up the action component. Therefore, once the operator finds the end of one of the laser guide lines that makes up the mark (49), he would follow that line to the center of the mark. Hence, the claim limitation is met.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Davienne Monbleau whose telephone number is 571-272-1945. The examiner can normally be reached on Monday through Friday 9-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Georgia Epps can be reached on 571-272-2328. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Davienne Monbleau

DNM

Stephone B. Allen
Primary Examiner